

#### ABSTRACT OF THE DISCLOSURE

A capacitor 19 comprises a lower electrode 14 formed on a substrate 10, an upper electrode 18 opposed to the lower electrode, and a capacitor dielectric film 16 formed between the lower electrode and the upper electrode, in which at least one of the lower electrode and the upper electrodes is an electrode of a metal substituted layer. The lower electrodes of polysilicon are formed, and then after the high-temperature heat processing for improving film quality of the capacitor dielectric film has been performed, the lower electrodes of polysilicon is substituted with aluminum to form the lower electrodes of aluminum, whereby aluminum, which cannot withstand the heat processing for improving film quality of the capacitor dielectric film can be used as a material of the lower electrodes. Thus, capacitors having good high-speed response can be formed.